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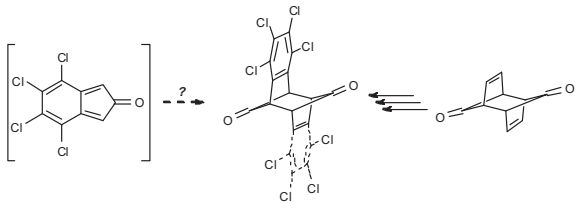
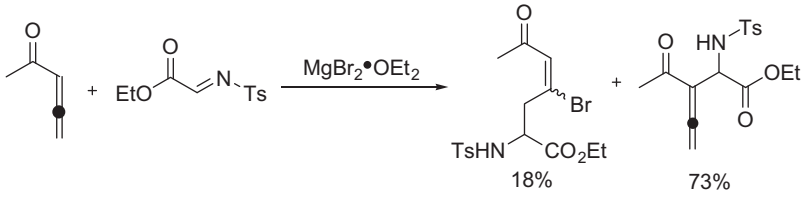
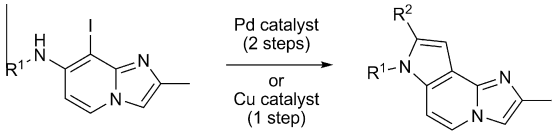
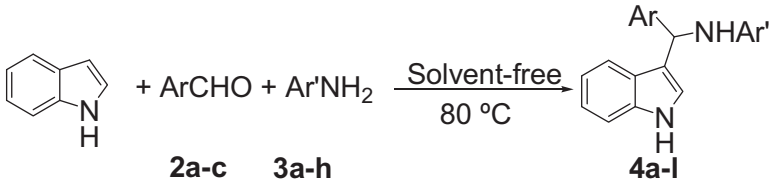
Contents

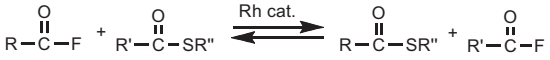
COMMUNICATIONS

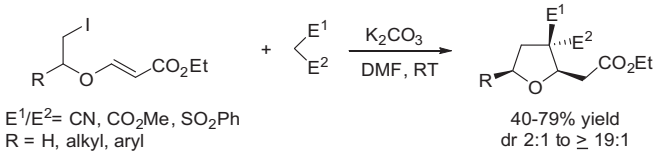




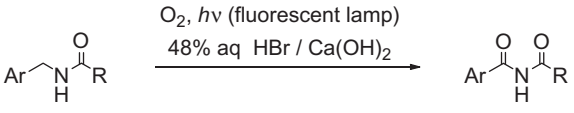




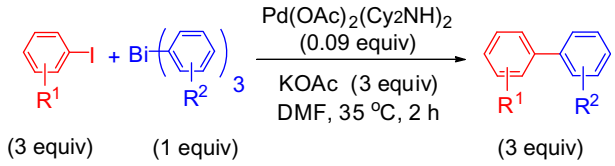


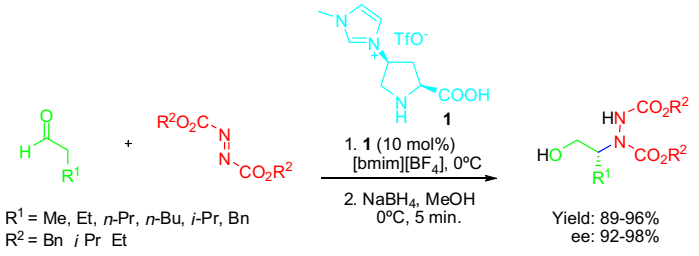


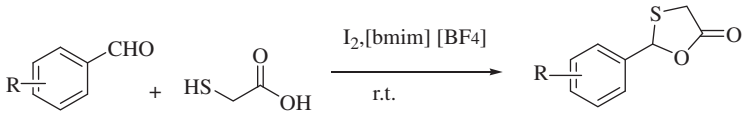
A stereoselective method for the synthesis of substituted tetrahydrofuran derivatives employing a tandem alkylation-Michael addition sequence to vinylogous carbonates is developed. The method is extended to the synthesis of adjacent *bis*-THFs.



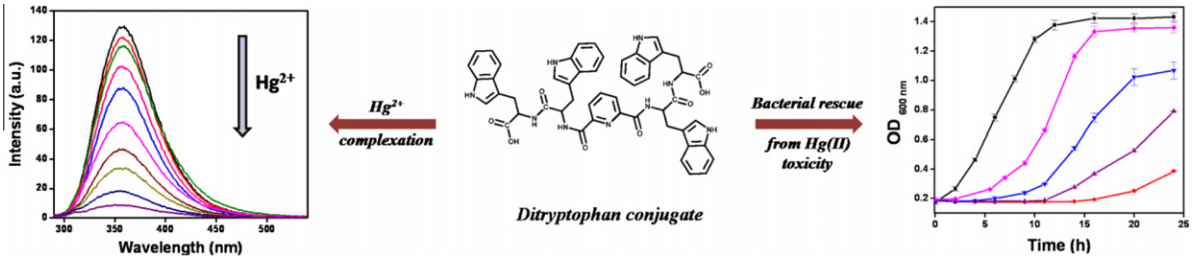
Benzylamides were found to be oxidized to their corresponding diacylamines in the presence of molecular oxygen, catalytic 48% aq HBr, and $Ca(OH)_2$ under visible light irradiation of a fluorescent lamp.



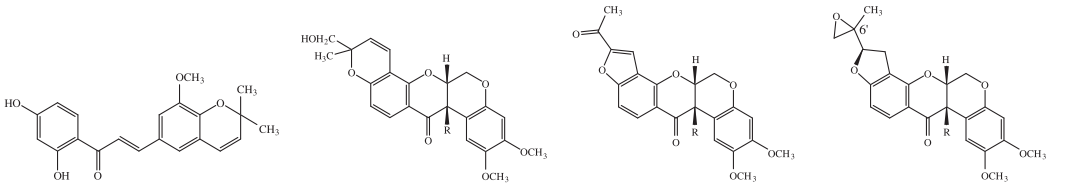




Aldehydes and mercaptoacetic acid are coupled in the presence of a catalytic amount of economical and non-toxic molecular iodine in [bmim][BF_4] ionic liquid under mild conditions to afford the corresponding 1,3-oxathiolan-5-one in excellent yields. Molecular iodine acts faster in ionic liquids when compared to conventional solvents such as DMSO, DMF, ethyl acetate, and acetonitrile. The recovered ionic liquids can be recycled in subsequent reactions with consistent activity.

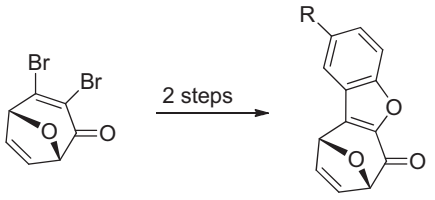


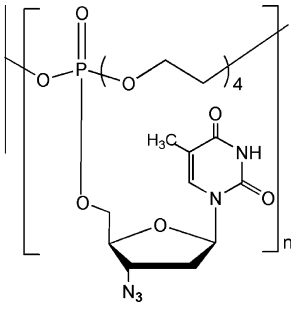
A pyridine-ditryptophan conjugate's interaction with mercury (II) was studied. This conjugate was found to rescue *E. coli* DH5α cells from mercury toxicity.

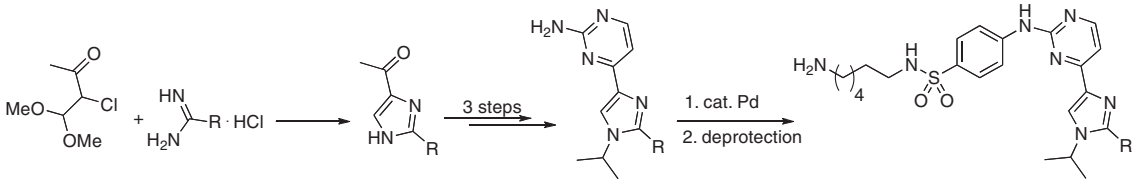


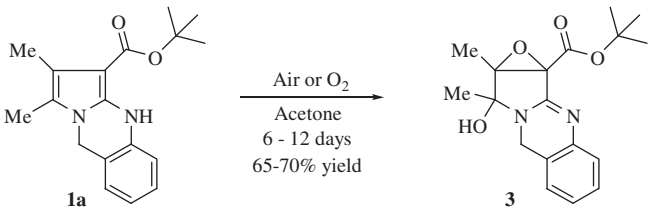
2 **5** R = H; **6** R = OH **7** R = H; **8** R = OH **9** R = H (6′*S*); **10** R = OH (6′*R*)

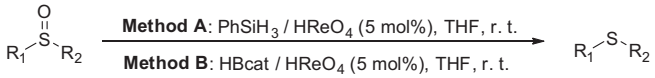
Lonchocarpus nicou roots lipophile extract afforded further metabolites (chalcone **2**, hydroxyrotenoids **5**–**6**, 7′-*nor*-6′-oxo-2′,3′-dehydrorotenoids **7**–**8** and 6′,7′-epoxyrotenoids **9**–**10**) of which **2**, **6,** and **7** are new and **5**, **9,** and **10** are reported for the first time in the plant kingdom.



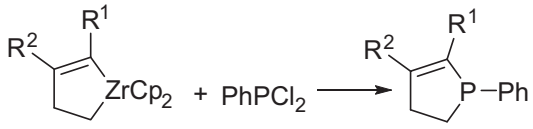


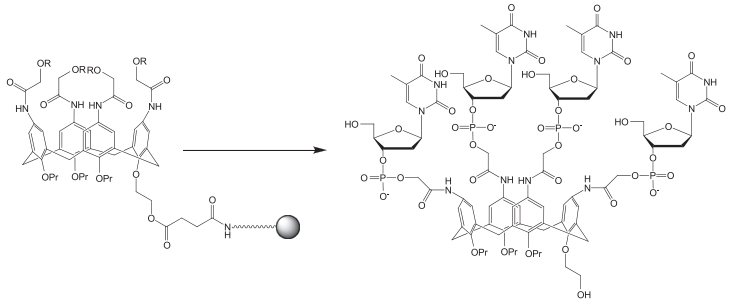


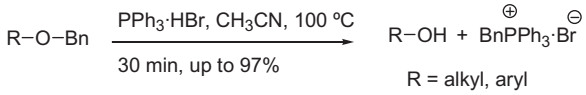


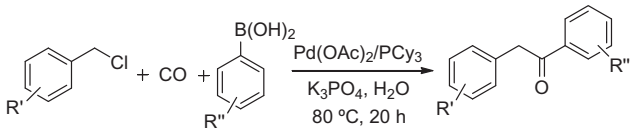


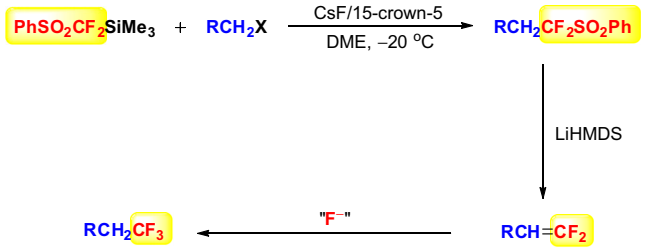
The two novel catalytic systems $PhSiH_3/HReO_4$ (5 mol %) and HBcat /$HReO_4$ (5 mol %) proved to be highly efficient and chemoselective for the reduction of sulfoxides at room temperature.

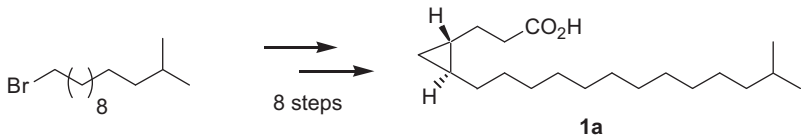




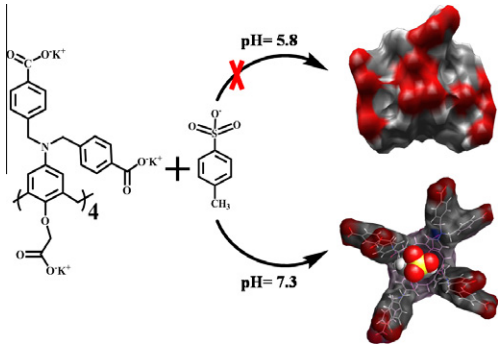


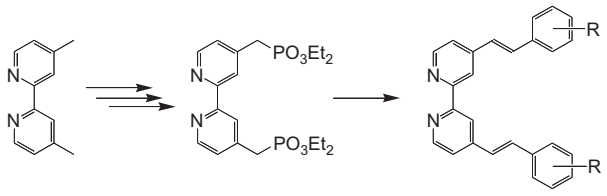




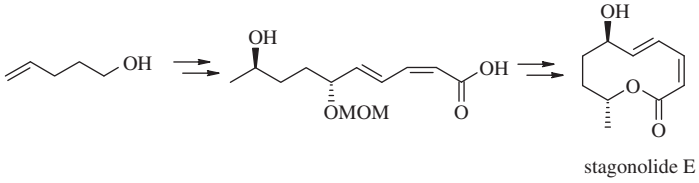


The first total synthesis of the marine cyclopropane fatty acid (±)-17-methyl-*trans*-4,5-methyleneoctadeconoic acid (**1a**) was accomplished in eight steps and in 9.1% overall yield starting from 1-bromo-12-methyltridecane. The *cis* isomer was cytotoxic to *Leishmania donovani* promastigotes (IC_{50} = 300.2 ± 4.2 μM).

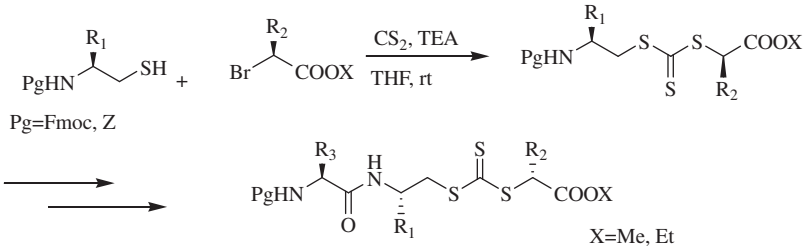




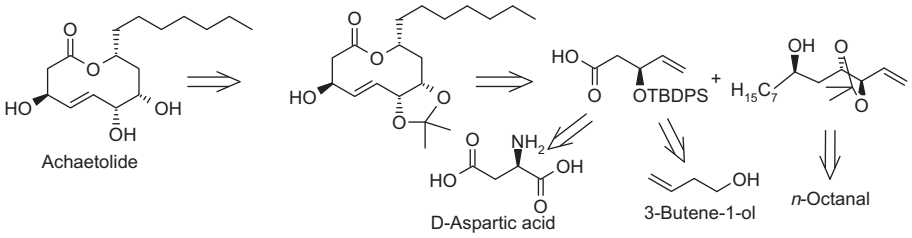
Based on the Horner–Emmons–Wadsworth reaction, a convenient synthetic route for the extension of the π-system on 4,4′-disubstituted-2,2′-bipyridines was used to develop a novel series of functionalized ligands for DSC applications.

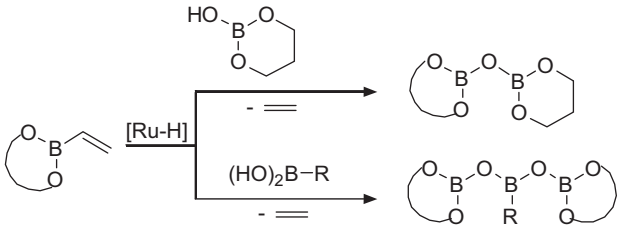


stagonolide E

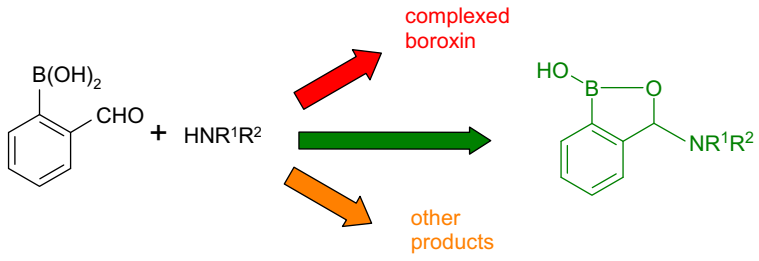


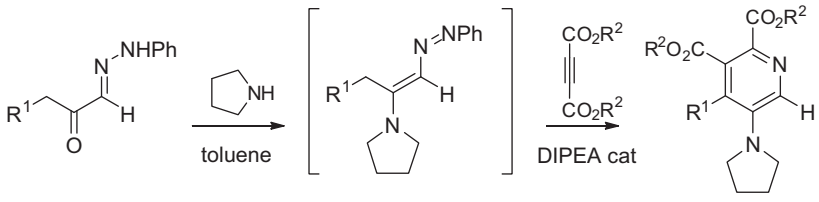
Synthesis of trithiocarbonate-linked peptidomimetics and neoglycosylated amino acids is described. Further, the protocol is also extended for the synthesis *N*,*N*′-orthogonally protected trithiocarbonate-linked dipeptidomimetics.

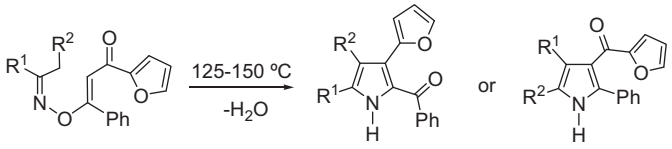


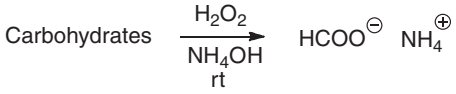


A new Ru–H complex catalyzed *O*-borylation of boronic acids with vinylboronates leading to boroxane bond formation with evolution of ethylene is described.

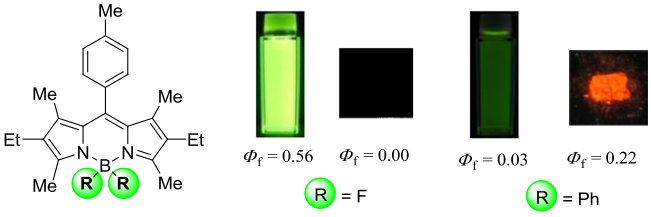








Various reducing carbohydrates were efficiently converted into ammonium formate under environment friendly and mild conditions in aqueous media.



*Corresponding author
Supplementary data available via ScienceDirect

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